COMMON INCIDENT COMMAND CENTER SITUATIONS

MERCURY

(May 2005)

Upon request, EER will take an active role in responding to mercury spills that occur at private residences, schools (including colleges and universities), hospitals and other health care facilities, retail businesses and most any other location except for manufacturing and industrial facilities. An EER response will typically include cleanup assistance, using a mercury vacuum, and air monitoring to help ensure the affected area is safe for occupancy. Manufacturing and industrial facilities are, normally, excluded since these types of businesses most likely utilize hazardous chemicals, should be familiar with cleanup procedures, and should take responsibility to handle their own incidents. As with any other chemical spill, EER may still respond to mercury spills at manufacturing and industrial sites to provide cleanup oversight if warranted.

If the cleanup is beyond the capabilities of the EER staff, then EPA Region VII should be contacted for assistance.

The EPA recommended mercury vapor level for continued occupancy in a residential setting is 0.3 $\mu g/m^3$. Homes, schools, daycare facilities, nursing homes, and hospitals should all be considered a residential setting. The OSHA permissible exposure limit (PEL) for the workplace is 50 $\mu g/m^3$. The Jerome meter has a detection limit of 1 $\mu g/m^3$. The Tracker 3000 has a detection limit of 0.1 $\mu g/m^3$.

If there are any health-related questions involving mercury exposure, both duty officers and the public should contact Randy Maley with the Missouri Department of Health and Senior Services at (573) 751-6404.

The US EPA OSC's in Kansas City and St. Louis may be able to make an initial response if MDNR's OSC's are unavailable in those areas.

Mercury Spills – Small Quantity

Small quantity is defined as common household consumer items such as thermometers (~ 0.7 gm) and thermostats (~ 3 gm).

Potential Contacts and/or Report Distribution: **(BOLD = REQUIRED CONTACTS)**

- **Regional Office**, and DHSS (if people have been significantly exposed)
- E-mail (January 4, 2005 memo on Guidance for EER E-Mail Messages) if an EER Response is made.

Duty Officer Considerations:

Cleanup – Small Quantity

- First determine if the material is truly mercury - a thermometer with a red or green liquid contains alcohol.
- If it's a broken thermometer, ask if the bulb is broken. If the bulb is not broken, the release is insignificant. The pieces should be scraped up with a playing card and triple-bagged for

disposal (discussed below). Ziplock freezer bags work well. As a precaution, advise the caller to open a window and ventilate the room to the outside using an exhaust fan for 24 hours.

- If the bulb is broken, ask if there are visible beads of mercury. Ask what type of surface is contaminated (e.g. hardwood floor, linoleum, carpet, etc.). If the contaminated surface is hard and relatively smooth, advise the caller to wear plastic gloves and use a playing card to scrape up the mercury. The mercury and debris (glass, gloves, playing card) should be placed in a heavy-duty Ziplock bag (freezer bag) for disposal (discussed below). Advise the caller - **Do not use a vacuum cleaner or broom**. Advise the caller to open a window in the room and ventilate with an exhaust fan for 48 hours. If the contaminated surface is carpet or other soft material, and there are visible beads of mercury embedded in the carpet, advise the caller to isolate the room and open a window for ventilation. The EER will then make an on-scene response as soon as practical to assist in cleanup. Advise the caller that mercury vapors have the potential to migrate through a central heating and air conditioning system, so the system should either be shut off or otherwise isolate the room affected by the spill (i.e., close all vents and air return vents in the affected area).

Disposal – Small Quantity

- If the EER does not make a response, the caller should be advised to triple-bag the mercury and cleanup debris, preferably using Ziplock freezer bags. The bagged material should then be placed into a crushproof container, such as a metal coffee can, and padded with newspaper or paper towels. The container should be wrapped in duct tape and discarded with trash that is destined for disposal in a permitted sanitary landfill. The packaging should prevent any further release.
- If the EER makes a response, then the mercury and small quantity cleanup debris (it must all fit into one 5-gal bucket) should be brought back to the ESP for recycling or proper disposal as hazardous waste. If some of the cleanup debris is too large to fit into a 5-gal bucket (e.g., a contaminated bathmat) and the incident location is residential, then the waste is exempt from hazardous waste regulations and can be discarded in the trash. EER staff should help by double bagging the waste in large garbage bags and then leaving the waste at the residence, preferably in a trash can located outdoors, for disposal at a sanitary landfill. If the location is not residential (e.g., a school or a retail business) then the responsible party must make their own arrangements for disposal of the large debris as a hazardous waste.

Mercury Spills - Large Quantity

Large quantity mercury spills involve essentially anything larger than the amount contained in a household thermometer or thermostat.

Potential Contacts and/or Report Distribution: **(BOLD = REQUIRED CONTACTS)**

- **Regional Office**, **EPA,** DHSS (if people have been significantly exposed) and SEMA (if applicable)
- E-mail (January 4, 2005 memo on Guidance for EER E-Mail Messages) if an EER Response is made.

Duty Officer Considerations:

Cleanup – Large Quantity

- Unless the caller has in-house expertise or indicates that a contractor is being hired to remediate the spill, the EER will respond to most large quantity spills to help assess the hazard and attempt a cleanup. The caller should be advised to isolate and ventilate the area until responders arrive. Advise the caller that mercury vapors have the potential to migrate through a central heating and air conditioning system, so the system should either be shut off or otherwise isolate the room affected by the spill (i.e., close the vents and air return vents in the affected area). Advise the caller - **Do not use a vacuum cleaner or broom.**
- Attempt to determine the magnitude of the spill and area affected. If it seems to be beyond the capabilities of the EER, then contact EPA at once to request a response. Otherwise, wait for EER staff to respond and assess the situation before requesting EPA assistance.
- For large quantity spills, the EPA should be contacted to assist in monitoring indoor air quality.
- Most large quantity cleanups will be accomplished using the mercury HEPA vacuum.

Disposal – Large Quantity

- Any elemental mercury found by the EER at an incident should be brought back to the ESP for proper recycling/disposal. Contaminated filters on the mercury vacuum should also be brought to the ESP for disposal as a hazardous waste. If a mercury spill kit is used to clean up the spill, the contaminated spill kit debris can be brought back to the ESP for disposal as a hazardous waste. Used PPE should be containerized and brought back to the ESP for disposal as solid waste if uncontaminated or as hazardous waste if visibly contaminated with mercury. In addition to the elemental mercury, dirty filters, and PPE, small quantities of contaminated debris (it must all fit into one 5-gal bucket) can be brought back to the ESP for proper disposal. For greater quantities, disposal will be the responsibility of the responsible party. In the past, EPA has been willing to assist in disposal of waste generated at a residential setting. Household hazardous waste is exempt from hazardous waste regulations and may be disposed of at a sanitary landfill. Mercury waste generated by any other source would likely fail TCLP and would be considered a RCRA hazardous waste (D009).

Requests for Assistance in Mercury Disposal/Recycling

Potential Contacts and/or Report Distribution: **(BOLD = REQUIRED CONTACTS)**

- **Regional Office**
- When the mercury code (211) under "Incident Cause" is selected when filling out the EER Incident Report, a copy of the EER Incident Report is sent , in text format , to the Route 66 Office, Duty Officer, and OSC.
- E-mail (January 4, 2005 memo on Guidance for EER E-Mail Messages) if EER Response is made.

Duty Officer Considerations:

- The EER has no dedicated funding to pay for mercury collection and recycling/disposal.
- The EER can accept elemental mercury and mercury-containing devices from private citizens, schools (elementary and secondary – but not from colleges and universities), and public health agencies such as county health departments. However, the EER will not

provide assistance to any organization, including schools and public health agencies, which operates either a temporary or permanent collection program.

- Any private citizen who calls from Columbia (573-874-6290), Kansas City (816-784-2481), Lee's Summit (816-979-7516), Chillicothe (660-646-1664), or Springfield (417-864-2018) should be referred to their local household hazardous waste collection center for disposal/recycling of any mercury they may have.
- For thermostats, the citizen should contact:
  - Honeywell thermostats – contact a local heating and air conditioning contractor that sells Honeywell products. They will accept them at no charge.
  - White-Rodgers thermostats – call White-Rodgers at (314) 577-1300. They will accept them at no charge.
  - For other brands – contact the local heating and air conditioning contractor that sells the product that they have and request them to take back the thermostat. They should be willing to provide assistance.
- If a private citizen calls with a request for assistance in handling just one or two household mercury thermometers, provide the following technical advice:
  - Find out if the thermometer is still in good condition (unbroken).
  - Make sure it is a mercury thermometer - if the liquid is red or green, it's filled with alcohol.
  - If it is a residential situation, and therefore considered household hazardous waste (HHW), the caller can either: a) put the thermometer in a safe location (e.g., in a Ziplock bag inside a rigid container such as a coffee can) away from children and keep it until a local or statewide collection program is established; or, b) dispose of it in a permitted sanitary landfill. For landfill disposal, the thermometer should be packaged in such a manner to minimize the chance of it being broken. The thermometer should be triple-bagged in Ziplock bags, placed in a rigid container, such as a small coffee or food can, and then taped shut with duct tape. The container can then be placed in household trash that is destined for a permitted landfill.
- The EER does not accept fluorescent light bulbs, mercury-based pesticides, or any mercury-contaminated debris (except for the small quantities that EER may generate during a cleanup).
- The EER does not accept mercury from any commercial enterprise. This includes hospitals and dental offices. The caller from a business should be advised that waste mercury should be considered a hazardous waste and must be either recycled or disposed of properly. Mercury waste generated at a business cannot be disposed of in a sanitary landfill. The caller should be referred to a hazardous waste disposal contractor or mercury recycling facility (check the internet).